

**IN THE CLAIMS:**

**Please cancel** claims 1-10. **Please also amend** claims 11-15 as shown in the complete list of claims that is presented below.

Claims 1-10 (cancelled).

11. (original) The semiconductor device fabricating method of claim ~~10~~, 13, wherein the fluorocarbon gas includes at least one selected from the group consisting of  $C_4F_8$ ,  $C_5F_8$ ,  $C_4F_6$  and  $C_3F_6$ .

12. (currently amended) The semiconductor device fabricating method of claim ~~10~~, 13, wherein the low-k film is one selected from the group consisting of an organic SOG film, an SiOC film and a pure organic film.

13. (original) ~~The~~ A semiconductor device ~~fabricating method of claim 10,~~  
fabricating method comprising the steps of:

forming a first interconnection;

forming a low-k film as an interlayer insulating film on the first interconnection;

forming a contact hole for electrically connecting the first interconnection and a second interconnection, in the interlayer insulating film comprising the low-k film; and

forming an interconnection groove for embedding the second interconnection in the interlayer insulating film comprising the low-k film,

wherein, in at least one of the hole forming step and the interconnection groove forming step, plasma etching is conducted under a gas atmosphere including a fluorocarbon gas,  $O_2$  gas and Ar gas, and under the conditions of a pressure of 60 mTorr (7999.32 mPa) or higher and a high-frequency output (RF power) of 600 W or less, and

wherein an etch stop layer is not formed ~~under~~ in the interlayer insulating film comprising the low-k film.

14. (currently amended) The semiconductor device fabricating method of claim ~~10~~, 13, wherein a ratio of O<sub>2</sub> to a combined amount of the fluorocarbon gas and O<sub>2</sub> is 20 to 50%.

15. (currently amended) The semiconductor device fabricating method of claim ~~10~~, 13, wherein, in both of the hole forming step and the interconnection groove forming step, plasma etching is conducted under a gas atmosphere including a fluorocarbon gas, O<sub>2</sub> gas and Ar gas, and under the conditions of a pressure of 60 mTorr (7999.32 mPa) or higher and a high-frequency output (RF power) of 600 W or less.